AMENDMENTS TO THE CLAIMS

This listing of claims supersedes all prior versions and listings of claims in this application:

LISTING OF CLAIMS:

1-3. (canceled).

4. (currently amended): An attitude control system for a geostationary satellite including elongate members such as solar generators or antennas, in particular deployable members, which system includes gyroscopic actuators for supplying the torque necessary for maintaining the attitude of said satellite when subjected to disturbing forces or torques and further including an attitude regulation loop including a corrector such that the bandwidth of said loop contains the lowest and most energetic frequencies of the flexible modes of said elongate members, wherein the attitude regulation loop provides a control signal to control the gyroscopic actuators.

5. (previously presented): The system claimed in claim 4 wherein said corrector is a proportional, integral, derivative corrector and is associated with an attenuation filter.

6. (previously presented): The system claimed in claim 4 wherein said corrector of said loop is synthesized by means of advanced system control methods.

7. (previously presented): The system claimed in claim 6 wherein said advanced system control methods is one of $H\infty$ and Linear Matrix Inequality methods.

8. (currently amended) A satellite, comprising:

elongated deployable members; and

an attitude control system, comprising:

a gyroscopic actuator that supplies torque to the satellite when the satellite is subjected to a disturbing force or a disturbing torque; and

a control system that receives signals representing a current attitude of the satellite and that controls the gyroscope actuator to supply a correction torque based on a difference between the current attitude of the satellite and a predetermined set attitude for the satellite;

wherein the gyroscopic actuator is one of a plurality of gyroscopic actuators, each gyroscopic actuator controlled by the control system to supply torque to maintain the predetermined set attitude of the satellite; and

wherein the control system comprises an attitude regulation loop, including a corrector such that the bandwidth of the loop contains the lowest and most energetic frequencies of flexible modes of the elongate members and the attitude regulation loop provides a control signal to control the gyroscopic actuators.

9. (previously presented): The satellite of claim 8, wherein the corrector is a proportional, integral, derivative corrector and is associated with an attenuation filter.

10. (previously presented): The satellite of claim 8, wherein the corrector of the loop is synthesized by means of advanced system control methods.

11. (previously presented): The satellite of claim 10, wherein the advanced system control methods are one of $H\infty$ and Linear Matrix Inequality methods.

12. (previously presented): The satellite of claim 8, wherein each of the gyroscopic actuators comprises a flywheel having a rotation axis, and wherein the control system varies a direction of one or more of the rotation axes, thereby applying torque to the satellite to maintain the predetermined set attitude of the satellite.

13. (previously presented): The satellite of claim 12, wherein the necessary torque for maintaining the predetermined set attitude is based on the precession tendency of one or more of the gyroscopes.

14. (previously presented): The satellite of claim 8, wherein the satellite is a geostationary satellite.